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| 09/487,361      | 01/19/2000  | William Geoghegan    | SYNC-001/01US       | 3076             |

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| EXAMINER |
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3626

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

09/487,361

Applicant(s)

GEOGHEGAN ET AL.

Examiner

Rachel L. Porter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 December 2006.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 5-10 and 22-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-10, 22-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Notice to Applicant***

1. This communication is in response to the amendments filed 12/11/06. Claims 1-3, 5-10 and 22-40 are pending. Claims 37-40 are new.

***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/11/06 has been entered.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 and 22-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tagawa (US Patent No. 5,732,39) in view of "Red Roof Inns Implements. . . ." (referred to hereinafter as Red) and Hanks et al ("Discounting in the Hotel Industry: A New Approach"—referred to hereinafter as Hanks)

As per claim 1, Tagawa teaches processor readable medium comprising code for representing instructions to cause a processor to (perform the following method):

- receive guest information from a first guest, said guest information comprising at least one item selected from the group of: a name, a market segment, and a point of origin (Figures 5a-5b; col. 12, lines 30-64; col. 13, lines 17-20)
- receive a room request from said first guest, the room request including at least one item selected from the group of: an arrival date, length of stay, at least one room attribute; (Figures 5a-5b; col. 12, lines 30-64)
- determine a first room rate for said first guest (col. 13, lines 21-25)

Tagawa teaches a method/system to assist a user (e.g. guest) in searching for and reserving hotel accommodations. The system receives the user's selection criterion (i.e. guest information and room request information). The guest and room request information may include the type of hotel the guest is seeking (i.e. market segment—budget, mid-range, deluxe) (col. 12, lines 51-55), a guest name (col. 13, lines 17-20) and the guest's desired arrival date and length of stay (i.e. check-in/check-out dates). Furthermore, the system determines a room rate for the guest (i.e. the total cost for the reservation). Tagawa also teaches that the system may offer hotel-pricing specials for certain participating vendors/hotels if the room supply (i.e. inventory) allows (col. 13, lines 32-36).

Tagawa does not specifically teach that room rate is based on a comparison between guest information and guest information associated with similar guests, and a

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comparison between the room request and a forecast of demand of a similar request, said forecast of demand based on historical data.

Red teaches the use of a revenue management system for hotel reservations that analyzes current and historical data on room requests and guest occupancy to forecast room demand and to determine room rates. (Red, paragraph 1). At the time of the Applicants' invention, it would have been obvious to one of ordinary skill in the art to modify the teaching of Tagawa with the teaching of Red to consider (compare) current and historical room request and guest occupancy levels to forecast room demand and to determine a room price. As suggested by Red, one would have been motivated to do this to maximize hotel revenue and to ensure that the rooms are sold to the appropriate guest at the best price. (Red, paragraph 2).

Claim 1 further recites determining a predetermined category guest within which the first guest can be classified based partially upon received guest information; and determining based at least partially on the received room request, a predetermined category of room with which the room can be satisfied. Finally, claim 1 recites determining a room rate using guest profile information associated with similar guests/customers and forecast demand information based upon historical data.

Tagawa and Red do not expressly disclose determining a predetermined category of guest within which the first guest can be classified based partially upon received guest information; and determining based at least partially on the received room request, a predetermined category of room with which the room can be satisfied.

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Hanks et al disclose a system in which guests are segmented with similar guest based at least partially upon received guest information (i.e. determining a predetermined category guest within which the first guest can be classified) (page. 10, par. 10). Hanks further discloses determining based at least partially on the received room request, a predetermined category of room with which the room can be satisfied. (Page 17, Exhibit 2, "Rooms Requested"). Hanks further discloses determining a room rate for the first guest based upon the predetermined category of guests (page. 10, par. 10; page 17, Exhibit 2, "Rooms Requested"; par 14-15) and based upon forecast demand for the predetermined category of room, wherein the forecast demand is based upon historical data. (par. 13-14; par. 34-38—pricing considers "usual" /historical demand for the rooms and forecasts the demands based upon the "usual" demand.) (Hanks also discloses that differential pricing for similar guests and/or guests with similar room requests is common in the hotel industry. (par. 1, 2, and 6)) At the time of the applicant's invention, it would have been obvious to one of ordinary skill in the art to modify the method/system of Tagawa and Red in combination with the teaching of Hanks. As suggested by Hanks, one would have been motivated to include these features to satisfy as many guests as possible and to maximize revenue (par. 7-8).

Claim 1 further recites that the system can access an inventory of hotel rooms that is organized as a hierarchal combination of a plurality of attributes associated with a room and determine whether a room satisfying said at least one room attribute in said

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room request is available within said inventory of rooms based on said plurality of attributes associated with said room.

Tagawa discloses a system that receives a user's selection criterion (i.e. guest information and room request information). The guest and room request information may include the type of hotel the guest is seeking (i.e. market segment—budget, mid-range, deluxe) (col. 12, lines 51-55), a guest name (col. 13, lines 17-20) and the guest's desired arrival date and length of stay (i.e. check-in/check-out dates). Tagawa and Red do not expressly disclose accessing an inventory of hotel rooms that is organized as a hierarchal combination of a plurality of attributes associated with a room and determining whether a room satisfying said at least one room attribute in said room request is available within said inventory of rooms based on said plurality of attributes associated with said room.

Hanks discloses that it is well-known in the art to access an inventory of hotel rooms that is organized as (e.g. a hierarchal combination of) a plurality of attributes associated with a room and determine whether a room satisfying said at least one room attribute in said room request is available within said inventory of rooms based on said plurality of attributes associated with said room. (page 19, par. 22; Exhibit 4). At the time of the Applicant's invention it would have obvious to one of ordinary skill in the art to modify the system of Tagawa and Red with the teaching of Hanks. As suggested by Hanks, one would have been motivated to include these features to maximize revenue for the hotelier. (page. 19, Exhibit 4)

As per claim 2, the limitations and amended features of this claim are substantially similar to those of claim 1 and as such are addressed in rejection of claim 1. Claim 2 differs from claim 1 in that it recites receiving guest information and a room request from a second guest. It is respectfully submitted that the method taught by Tagawa in view of Red (receiving guest information, receiving room request data, analyzing current and historical data to forecast demand and to determine a room rate) would accommodate one or more users (i.e. first guest, second guest, third guest. . .) making a (hotel) reservation. Thus, a method that receives of the guest/room request information from a first user (guest) and determines a price for that user would also be able to receive guest information and room data and determine a room rate for different users (i.e. second, third guests).

Claim 2 further differs from claim 1 it recites that the second room request is similar to the first room request and that the second room rate is different from the first room rate. It is unclear from Tagawa and Red whether the room rate that is determined is based on similar room request data (data similar among different guests) and whether the room rate for a similar room request differs from guest to guest. However, Red does teach a method of processing current and historical guest information to offer room rates that will maximize revenue for the hotel. At the time of the Applicant's invention, it would have been obvious to one of ordinary skill in the art that the method of Tagawa in view of Red includes generating different room rates for different guests, even when the room request data for those guests is similar. One would have been motivated to offer differential or special pricing to different guests for similar rooms to



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appeal to various market segments (i.e. senior, motor club members, frequent travelers), thereby maximizing hotel reservations and revenue in light of forecasted market demand as suggested by Red. (paragraph 1)

As per claim 3, the limitations of this claim are substantially similar to those of claim 1 and as such are addressed in rejection of claim 1. Claim 3 differs from claim 1 in that it recites receiving guest information and a room request from a second guest. It is respectfully submitted that the method taught by Tagawa in view of Red (receiving guest information, receiving room request data, analyzing current and historical data to forecast demand and to determine a room rate) would accommodate one or more users (i.e. first guest, second guest, third guest. . .) making a (hotel) reservation. Thus, a method that receives the guest/room request information from a first user (guest) and determines a price for that user would also be able to accept guest information and room request data determine room rates for different users (i.e. second, third guests).

Claim 3 further differs from claim 1 it recites that the second guest data is similar to the first guest information and that the second room rate is different from the first room rate. Red teaches the use of a revenue management system for hotel reservations that analyzes (i.e. compares) current and historical data on room requests and guest occupancy (i.e. guest profile information *associated* with similar guests) to forecast room demand and to determine room rates. (Red, paragraph 1). Tagawa and Red do not expressly disclose that a determined room rate for may differ for similar guest(s). However, Red does disclose that the purpose of the disclosed system is to

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allow rooms to be sold at the right price on a given day. (par. 1) At the time of the Applicant's invention, it would have been obvious to one of ordinary skill in the art that the method of Tagawa in view of Red includes generating different prices/room rates for similar guests. As suggested by Red, it would be obvious to include this feature so hotels could set room rates that would maximize revenues under various forecasted market demand conditions. (Red, paragraphs 1-4) In other words, hotels would charge according to what the market will bear and not base charges solely on guest data similarities.

[claim 22] Tagawa teaches a system, comprising:

- an interface configured to receive guest information and a room request from a first guest; and (Figures 5a-5b; col. 12, lines 30-64; col. 13, lines 17-20)
- a processor in communication with the interface, the processor being configured to determine a room rate (col. 13, lines 17-21)

Tagawa teaches a system including an interface to assist a user (e.g. guest) in searching for and reserving hotel accommodations. The system receives the user's selection criterion (i.e. guest information and room request information). The guest and room request information may include the type of hotel the guest is seeking (i.e. market segment—budget, mid-range, deluxe) (col. 12, lines 51-55), a guest name (col. 13, lines 17-20) and the guest's desired arrival date and length of stay (i.e. check-in/check-out dates). Furthermore, the system determines a room rate for the guest (i.e. the total cost for the reservation). Tagawa also teaches that the system includes a processor to offer

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hotel-pricing specials for certain participating vendors/hotels if the room supply (i.e. inventory) allows (col. 13, lines 32-36).

Tagawa does not specifically teach that room rate is based on a comparison between guest information and guest profile information associated with similar guests, and a comparison between the room request and a forecast of demand of a similar request, said forecast of demand based on historical data.

Red teaches the use of a revenue management system for hotel reservations that analyzes (i.e. compares) current and historical data on room requests and guest occupancy to forecast room demand and to determine room rates. (Red, paragraph 1). At the time of the Applicants' invention, it would have been obvious to one of ordinary skill in the art to modify the teaching of Tagawa with the teaching of Red to consider (compare) current and historical room request and guest data (i.e. occupancy levels) to forecast room demand and to determine a room price. As suggested by Red, one would have been motivated to do this to maximize hotel revenue and to ensure that the rooms are sold to the appropriate guest at the best price. (Red, paragraph 2).

Claim 22 further recites determining a predetermined category guest within which the first guest can be classified based partially upon received guest information; and determining based at least partially on the received room request, a predetermined category of room with which the room can be satisfied. Finally, claim 1 recites determining a room rate using guest profile information associated with similar guests/customers and forecast demand information based upon historical data. Tagawa and Red do not expressly disclose determining a predetermined category of

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guest within which the first guest can be classified based partially upon received guest information; and determining based at least partially on the received room request, a predetermined category of room with which the room can be satisfied.

Hanks et al disclose a system in which guests are segmented with similar guest based at least partially upon received guest information (i.e. determining a predetermined category guest within which the first guest can be classified) (page. 10, par. 10). Hanks further discloses determining based at least partially on the received room request, a predetermined category of room with which the room can be satisfied. (Page 17, Exhibit 2, "Rooms Requested"). Hanks further discloses determining a room rate for the first guest based upon the predetermined category of guests (page. 10, par. 10; page 17, Exhibit 2, "Rooms Requested"; par 14-15) and based upon forecast demand for the predetermined category of room, wherein the forecast demand is based upon historical data. (par. 13-14; par. 34-38—pricing considers "usual" /historical demand for the rooms and forecasts the demands based upon the "usual" demand.) (Hanks also discloses that differential pricing for similar guests and/or guests with similar room requests is common in the hotel industry. (par. 1, 2, and 6)) At the time of the applicant's invention, it would have been obvious to one of ordinary skill in the art to modify the method/system of Tagawa and Red in combination with the teaching of Hanks. As suggested by Hanks, one would have been motivated to include these features to satisfy as many guests as possible and to maximize revenue (par. 7-8).

Claim 22 further recites that the system can access an inventory of hotel rooms that is organized as a hierarchal combination of a plurality of attributes associated with a

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room and determine whether a room satisfying said at least one room attribute in said room request is available within said inventory of rooms based on said plurality of attributes associated with said room.

Tagawa discloses a system that receives a user's selection criterion (i.e. guest information and room request information). The guest and room request information may include the type of hotel the guest is seeking (i.e. market segment—budget, mid-range, deluxe) (col. 12, lines 51-55), a guest name (col. 13, lines 17-20) and the guest's desired arrival date and length of stay (i.e. check-in/check-out dates). Tagawa and Red do not expressly disclose accessing an inventory of hotel rooms that is organized as a hierarchal combination of a plurality of attributes associated with a room and determining whether a room satisfying said at least one room attribute in said room request is available within said inventory of rooms based on said plurality of attributes associated with said room.

Hanks discloses that it is well-known in the art to access an inventory of hotel rooms that is organized as (e.g. a hierarchal combination of) a plurality of attributes associated with a room and determine whether a room satisfying said at least one room attribute in said room request is available within said inventory of rooms based on said plurality of attributes associated with said room. (page 19, par. 22; Exhibit 4). At the time of the Applicant's invention it would have obvious to one of ordinary skill in the art to modify the system of Tagawa and Red with the teaching of Hanks. As suggested by Hanks, one would have been motivated to include these features to maximize revenue for the hotelier. (page. 19, Exhibit 4)

[claim 23] Tagawa teaches system wherein the interface is configured to receive guest information including at least one of a name, a market segment, and a point of origin. (Figures 5a-5b; col. 12, lines 30-64; col. 13, lines 17-20)

[claim 24] Tagawa teaches a reservation system comprising, further comprising a centralized database in communication with the interface and the processor. (col. 12, lines 53-58) Tagawa further discloses that the centralized database may be queried and data may be retrieved based upon the guest's/user's preferences, but does not disclose that the database stores guest profile information or historical information.

Hanks discloses a that the hotel industry stores information historical and guest information on similar guests (i.e. guests having similar profile information to a first guest). (par. 1-2—Guests with similar profiles and with historical information stored: 3 executives check-in, with similar rooms, for the same length of time, on the same night) At the time of the applicant's invention, it would have been obvious to one of ordinary skill in the art to further modify the method of Tagawa and Red in combination with the teaching of Hanks to store "customer profile" for similar customers and historical information on a centralized database. One would have been motivated to include these features facilitate the retrieval of data required to satisfy as many guests as possible and to maximize revenue (par. 7-8), as suggested by Hanks.

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[claim 25] Tagawa teaches a system wherein a centralized database is configured to store information associated with a first lodging property and information associated with a second lodging property, the information associated with the first lodging property and the information associated with the second lodging property each including an inventory of rooms. (col. 12, lines 45-64)

[claim 26] Tagawa teaches a further comprising:

- a first external database associated with the first lodging property, the first external database being configured to store inventory information associated with rooms of the first lodging property including availability information and pricing information of rooms of the first lodging property; and (col. 13, lines 32-43—e.g. plurality of vendor or local databases)
- a second external database associated with the second lodging property, the second external database being configured to store inventory information associated with rooms of the second lodging property including availability information and pricing information regarding each of said inventory of rooms of rooms of the second lodging property. (col. 13, lines 32-43--- e.g. plurality of vendor or local databases)

[claim 27] Tagawa teaches a system further comprising:

a reservations management system configured to communicate with the interface and the processor (col. 10, lines 17-41; col. 12, line 30-col. 13, line 23), the reservations management system being configured to communicate with a first reservation system and a second reservation system different from the first reservation system (col. 13,

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lines 32-43--- e.g. plurality of vendor or local databases), the reservations management system being configured to make a reservation for a room of at least one of the first lodging property and the second lodging property based on the guest information, the reservations management system being further configured to update information in the centralized database associated with the reservation, and the reservations management system being further configured to update inventory information in at least one of the first external database and the second external database based on the reservation. (col. 13, lines 37-40)

[claim 28] Tagawa teaches a system wherein the reservations management system is configured to query the centralized database for inventory information associated with rooms of the first lodging property and for inventory information associated with rooms of the second lodging property. (col. 12, lines 53-59)

[claim 29] Tagawa, Red and Hanks teach the system of claim 22 as explained in the rejection of claim 22. Tagawa also discloses a system comprising a reservations management system configured to communicate with the interface and the processor, the reservations management system being configured to communicate with a first reservation system and a second reservation system different from the first reservation system, the reservations management system being configured to make a reservation for a room of at least one of a first lodging property and a second lodging property based on the guest information. (col. 12, lines 45-col. 13, line 7; col. 13, lines 17-25; 32-44)



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[claim 30] Tagawa teaches a system wherein the first reservation system includes at least one of a global distribution system and a property management system that controls an inventory of at least one of a hotel and a hotel chain. (col. 13, lines 37-43)

[claim 31] Tagawa teaches a wherein the interface includes at least one of a reservation agent terminal, a direct access client, and a web server coupled to a web browser, the interface being in communication with the first reservation system.

(Tagawa: col. 9, line 55-col. 10, line 9; col. 10, lines 17-41—Internet communication to vendors, clients, CRS's)

[claim 32] Tagawa teaches a system of claim 29, wherein the reservations management system is configured to cause the processor to determine a room rate for the first guest. (col. 13, line 17-23)

[claim 33] Tagawa teaches a travel reservation system as disclosed in the rejections of claims 22 and 29, but does not expressly disclose the details of managing the revenue or yield the lodging properties. However, Tagawa does disclose teaches that the system includes a processor to offer hotel pricing specials for certain participating vendors/hotels if the room supply (i.e. inventory) allows (col. 13, lines 32-36). Red teaches the use of a revenue management system in a hotel reservations system. (Red, paragraph 1). At the time of the Applicants' invention, it would have been obvious to one of ordinary skill in the art to modify the system of Tagawa with the teaching of Red to manage hotel revenue/yield when processing reservations. As suggested by Red, one would have been motivated to do this to maximize hotel revenue and to ensure that the rooms are sold to the appropriate guest at the best price. (Red, paragraph 2).

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[claim 34-35] Tagawa teaches a system, which includes a plurality of interfaces which communication with various reservation systems, and/or other client systems (col. 9, line 55-col. 10, line 9; col. 10, lines 17-41) Moreover, the data from the plurality of sources (e.g. various CRS's, hotel, airline, and car reservation systems) are retrieved and presented in the format(s) required by the different data recipients in the system(col. 10, lines 20-41—format conversion performed as needed).

[claim 36] Tagawa teaches a reservation management system comprising:

- a centralized database configured to store information associated with an inventory of rooms for a first lodging property and information associated with an inventory of rooms for a second lodging property; (col. 12, lines 23-64)
- a first external database in communication with the centralized database, the first external database being configured to store inventory information associated with the first lodging property, the inventory information including availability information and pricing information associated with the first lodging property; (col. 13, lines 32-43—e.g. plurality of vendor or local databases)
- a second external database in communication with the centralized database, the second external database being configured to store inventory information associated with the second lodging property, the inventory information including availability information and pricing information associated with the second lodging property; and(col. 13, lines 32-43—e.g. plurality of vendor or local databases)

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- a reservations management system in communication with the centralized database and at least one of the first external database and the second external database (col. 10, lines 17-41; col. 12, lines 45-col. 13, line 7; col. 13, lines 17-25;32-44), the reservations management system being configured to determine a room rate for a guest (col. 13, lines 17-23).

Tagawa discloses that the system determines a room rate for the guest (i.e. the total cost for the reservation). Tagawa also teaches that the system may offer hotel-pricing specials for certain participating vendors/hotels if the room supply (i.e. inventory) allows (col. 13, lines 32-36), but does not specifically teach that room rate is based on a comparison between guest information and guest profile information associated with similar guests, and a comparison between the room request and a forecast of demand of a similar request, the forecast of demand based on historical data (retrieved from the database).

Red teaches the use of a revenue management system for hotel reservations that analyzes (i.e. compares) current and historical data on room requests and guest occupancy to forecast room demand and to determine room rates. (Red, paragraph 1). At the time of the Applicants' invention, it would have been obvious to one of ordinary skill in the art to modify the teaching of Tagawa with the teaching of Red to consider (compare) current and historical room request and guest data (i.e. occupancy levels) to forecast room demand and to determine a room price. As suggested by Red, one would have been motivated to do this to maximize hotel revenue and to ensure that the rooms are sold to the appropriate guest at the best price. (Red, paragraph 2).

Claim 36 further recites determining a predetermined category guest within which the first guest can be classified based partially upon received guest information; and determining based at least partially on the received room request, a predetermined category of room with which the room can be satisfied. Finally, claim 1 recites determining a room rate using guest profile information associated with similar guests/customers and forecast demand information based upon historical data. Tagawa and Red do not expressly disclose determining a predetermined category of guest within which the first guest can be classified based partially upon received guest information; and determining based at least partially on the received room request, a predetermined category of room with which the room can be satisfied.

Hanks et al disclose a system in which guests are segmented with similar guest based at least partially upon received guest information (i.e. determining a predetermined category guest within which the first guest can be classified) (page. 10, par. 10). Hanks further discloses determining based at least partially on the received room request, a predetermined category of room with which the room can be satisfied. (Page 17, Exhibit 2, "Rooms Requested"). Hanks further discloses determining a room rate for the first guest based upon the predetermined category of guests (page. 10, par. 10; page 17, Exhibit 2, "Rooms Requested"; par 14-15) and based upon forecast demand for the predetermined category of room, wherein the forecast demand is based upon historical data. (par. 13-14; par. 34-38—pricing considers "usual" /historical demand for the rooms and forecasts the demands based upon the "usual" demand.) (Hanks also discloses that differential pricing for similar guests and/or guests with

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similar room requests is common in the hotel industry. (par. 1, 2, and 6)) At the time of the applicant's invention, it would have been obvious to one of ordinary skill in the art to modify the method/system of Tagawa and Red in combination with the teaching of Hanks. As suggested by Hanks, one would have been motivated to include these features to satisfy as many guests as possible and to maximize revenue (par. 7-8).

Claim 36 further recites that the system can access an inventory of hotel rooms that is organized as a hierarchal combination of a plurality of attributes associated with a room and determine whether a room satisfying said at least one room attribute in said room request is available within said inventory of rooms based on said plurality of attributes associated with said room.

Tagawa discloses a system that receives a user's selection criterion (i.e. guest information and room request information). The guest and room request information may include the type of hotel the guest is seeking (i.e. market segment—budget, mid-range, deluxe) (col. 12, lines 51-55), a guest name (col. 13, lines 17-20) and the guest's desired arrival date and length of stay (i.e. check-in/check-out dates). Tagawa and Red do not expressly disclose accessing an inventory of hotel rooms that is organized as a hierarchal combination of a plurality of attributes associated with a room and determining whether a room satisfying said at least one room attribute in said room request is available within said inventory of rooms based on said plurality of attributes associated with said room.

Hanks discloses that it is well-known in the art to access an inventory of hotel rooms that is organized as (e.g. a hierarchal combination of) a plurality of attributes

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associated with a room and determine whether a room satisfying said at least one room attribute in said room request is available within said inventory of rooms based on said plurality of attributes associated with said room. (page 19, par. 22; Exhibit 4). At the time of the Applicant's invention it would have obvious to one of ordinary skill in the art to modify the system of Tagawa and Red with the teaching of Hanks. As suggested by Hanks, one would have been motivated to include these features to maximize revenue for the hotelier. (page. 19, Exhibit 4)

5. Claims 5-7, 9-10, and 37-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tagawa, Red, and Hanks as applied to claims 1, 22, and 36 and further in view of Kerr et al (USPN 5,404,291).

As per claim 5, Tagawa, Red, and Hanks in combination teach the computer-implemented method of claim 1 as explained in the rejection of claim 1. Tagawa further discloses a method of processing a customer room request, but does not specifically disclose the details of organizing hotel inventory based on room attributes to coordinate customer reservations. Kerr discloses a computer-implemented method (i.e. processor readable medium comprising code for causing a processor to perform the following method):

- organize said inventory of hotel rooms as a plurality of first attribute combinations(rate-category "i") , second attribute combinations (room-rate type "ij") and third attribute combinations, wherein each said first attribute combination comprises at least one second attribute combination, and each

said second attribute combination comprises at least one third attribute combination (room-type "j"); (Kerr: col. 3, lines 12-23; col. 125, lines 16-60; col. 126, lines 55-67)

- determine a number of rooms in said inventory represented by each of said attribute combinations; (Kerr: col. 3, line 55-col. 4, line 3)
- identify each attribute combination from said plurality of attribute combinations that corresponds to said at least one room attribute in said room request; and (Kerr: Figure 2; col. 5, lines 18-24; col. 6, lines 15-24)
- determine whether said room request can be met from said inventory based on a number of rooms available for each identified attribute combination.

(Kerr: Figure 2; col. 5, lines 18-24; col. 7, lines 4-19)

At the time of the Applicant's invention, it would have been obvious to one of ordinary skill in the art to further modify the computer-implemented method of Tagawa, Red, and Hanks in combination with the teaching of Kerr to analyze availability information based on room attribute information in a customer reservation request. As suggested by Kerr, one would have been motivated to do this to accommodate customer preferences (col. 4, lines 4-12) and to facilitate reservation management by offering more accurate chain inventory status, and to ultimately maximize hotel profits. (col. 2, lines 7-19)

As per claim 6, Tagawa, Red, and Hanks disclose processing customer reservation requests as explained in the rejection of claims 1 and 4, but do not specifically disclose adjusting the number of available rooms if a customer request can be met. However, Tagawa does disclose verifying up-to-date (i.e. real-time) hotel

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vendor inventory before accepting a customer reservation request (Tagawa: col. 13, lines 32-43). Tagawa further discloses a system that updates the inventory of other travel accommodations (i.e. car rentals) when it is determined that a customer request can be met. (col. 13, lines 62-66). Kerr teaches adjusting said number of rooms available for each identified attribute combination if said room request can be met from said inventory. (Kerr: Figure 2; col. 3, lines 3-23—System checks the inventory of the room to determine if it can be sold to a requestor and updates the inventory accordingly.) At the time of the Applicant's invention, it would have been obvious to one of ordinary skill in the art to further modify the method of Tagawa, Red, and Hanks in combination with the teaching of Kerr to update (i.e. adjust) availability information based on whether a customer reservation request can be met. As suggested by Kerr, one would have been motivated to do this to accommodate customer preferences (col. 4, lines 4-12) and to improve the accuracy of chain inventory status. (col. 2, lines 7-19)

As per claim 7, Tagawa, Red, Hanks and Kerr teach claim 5 as explained in the rejection of claim 5. Tagawa, Red, and Hanks do not specifically disclose the details of declining a room request. Kerr teaches a method further comprising denying a room request if the room request cannot be met from the inventory. (Kerr: col. 3, lines 40-col. 6, line 61-col. 7, line 9) Kerr discloses that the reservation manager may set maximum levels for each rate type, room type and rate/room combination and further discloses that before a sale is completed in response to a request, availability information must be verified. It is respectfully submitted that one of ordinary skill in the art would have understood that this results of this verification process would include the acceptance of



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a request if the availability rules are not violated (i.e. inventory is sufficient) or the denial of a room request if the availability rules are violated (i.e. if request cannot be met from the available inventory). At the time of the Applicant's invention, it would have been obvious to one of ordinary skill in the art to modify the method of Tagawa, Red, and Hanks with the teaching of Kerr to deny a room request if the request cannot be met by the inventory. One would have been motivated to do this to provide timely notification to the traveler that other arrangements are necessary, thus minimizing customer inconvenience and dissatisfaction with the hotel chain.

As per the limitations of claims 9-10, Tagawa discloses a method for receiving a customer request for a hotel room (Tagawa: col. 12, line 31-col. 13, line 43,) but does not disclose the use of forecast demand or determining room rates based upon room availability. Red discloses a method wherein the number of rooms available is based on forecast demand and wherein the room rate (i.e. first room rate) is based upon the number of rooms available (i.e. occupancy rate). (Red: paragraphs 1 and 2) At the time of the Applicant's invention, it would have been obvious to one of ordinary skill in the art to modify the method of Tagawa with the teaching of Red to determine the number of available rooms based on forecast demand and to determine price based upon room availability. As suggested by Red, one would have been motivated to do this so hotels could set room rates that would maximize revenues under various forecasted market demand conditions and according to what the market will bear. (Red, paragraph 2)

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[claims 37-38] Tagawa, Red, and Hanks disclose the system of claim 26, as explained in the rejection of claim 22 and claim 26.

Tagawa discloses a system comprising a first external database to store inventory information associated with the first lodging property, the inventory information including availability information and pricing information associated with the first lodging property; (col. 13, lines 32-43—e.g. plurality of vendor or local databases) and second external database in communication being configured to store inventory information associated with the second lodging property, the inventory information including availability information and pricing information associated with the second lodging property; and (col. 13, lines 32-43—e.g. plurality of vendor or local databases)

Furthermore Hanks discloses that it is well-known in the art provide an inventory of hotel rooms that is organized as (e.g. a hierarchical combination of) a plurality of attributes associated with a room and determine whether a room satisfying said at least one room attribute in said room request is available within said inventory of rooms based on said plurality of attributes associated with said room. (page 19, par. 22; Exhibit 4).

Tagawa, Red, and Hanks in combination do not expressly disclose that said plurality of attributes comprising a plurality of first attribute combinations, second attribute combinations, and third attribute combinations, wherein each said first attribute combination comprises at least one second attribute combination and each said second attribute combination comprises at least one third attribute combination.

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Kerr discloses a system wherein said inventory of hotel rooms is organized as a plurality of first attribute combinations (rate-category "i") , second attribute combinations (room-rate type "ij") and third attribute combinations, wherein each said first attribute combination comprises at least one second attribute combination, and each said second attribute combination comprises at least one third attribute combination (room-type "j"); (Kerr: col. 3, lines 12-23; col. 125, lines 16-60; col. 126, lines 55-67). At the time of the Applicant's invention, it would have been obvious to one of ordinary skill in the art to modify the system of Tagawa, Red, and Hanks in combination with the teaching of Kerr to organize the rooms using attribute combinations. As suggested by Kerr, one would have been motivated to do this to accommodate customer preferences (col. 4, lines 4-12) and to facilitate reservation management by offering more accurate chain inventory status, and to ultimately maximize hotel profits. (col. 2, lines 7-19)

[claims 39-40] Tagawa, Red, and Hanks disclose the system of claim 36, as explained in the rejection of claim 36.

Tagawa discloses a system comprising a first external database to store inventory information associated with the first lodging property, the inventory information including availability information and pricing information associated with the first lodging property; (col. 13, lines 32-43—e.g. plurality of vendor or local databases) and second external database in communication being configured to store inventory information associated with the second lodging property, the inventory information including availability

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information and pricing information associated with the second lodging property;  
and(col. 13, lines 32-43—e.g. plurality of vendor or local databases)

Furthermore Hanks discloses that it is well-known in the art provide an inventory of hotel rooms that is organized as (e.g. a hierarchal combination of) a plurality of attributes associated with a room and determine whether a room satisfying said at least one room attribute in said room request is available within said inventory of rooms based on said plurality of attributes associated with said room. (page 19, par. 22; Exhibit 4).

Tagawa, Red, and Hanks in combination do not expressly disclose that said plurality of attributes comprising a plurality of first attribute combinations, second attribute combinations, and third attribute combinations, wherein each said first attribute combination comprises at least one second attribute combination and each said second attribute combination comprises at least one third attribute combination.

Kerr discloses a system wherein said inventory of hotel rooms is organized as a plurality of first attribute combinations (rate-category "i"), second attribute combinations (room-rate type "ij") and third attribute combinations, wherein each said first attribute combination comprises at least one second attribute combination, and each said second attribute combination comprises at least one third attribute combination (room-type "j"); (Kerr: col. 3, lines 12-23; col. 125, lines 16-60; col. 126, lines 55-67). At the time of the Applicant's invention, it would have been obvious to one of ordinary skill in the art to modify the system of Tagawa, Red, and Hanks in combination with the teaching of Kerr to organize the rooms using attribute combinations. As suggested by

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Kerr, one would have been motivated to do this to accommodate customer preferences (col. 4, lines 4-12) and to facilitate reservation management by offering more accurate chain inventory status, and to ultimately maximize hotel profits. (col. 2, lines 7-19)

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tagawa, Red, Hanks and Kerr as applied to claim 6 above, and further in view of Jung et al (USPN 4,775, 936).

As per claim 8, Tagawa, Red and Kerr teach claim 6 as explained in the rejection of claim 6. Tagawa, Red, and Kerr do not specifically teach that the number of rooms includes an allowed number of overbooked rooms, but Red does disclose a method that makes recommendations regarding overbooking opportunities. (Red: paragraph 1) Jung discloses a system wherein the available inventory includes an allowed overbooking level for the inventory (e.g. number of overbooked rooms, seats, fleet vehicles). (col. 2, lines 29-53; col. 4, lines 56-col. 5, line 30; col. 9, line 64-col. 10, line 5) At the time of the Applicant's invention, it would have been obvious to one of ordinary skill in the art to further modify the method of Tagawa, Red, Hanks and Kerr with the teaching of Jung to include an allowed number of overbooked rooms among the number of rooms available. As suggested by Jung, one would have been motivated to do this to maximize profits by using the total capacity of the hotel and to guard against the potential loss in revenue caused by "no-shows." (col. 1, lines 14-36; col. 9, line 64-col. 10, line 5)

***Response to Arguments***

(A) Applicant's arguments with respect to claims 1-3, 5-10 and 22-40 have been considered but are moot in view of the new ground(s) of rejection.

Applicant apparently argues the newly added limitations. However, these features have been addressed with new citations and new art rejections provided for the applicants consideration.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachel L. Porter whose telephone number is (571) 272-6775. The examiner can normally be reached on M-F, 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on (571) 272-6776. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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RP  
RP

Robert Morgan  
Patent Examiner  
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